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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/798,038	03/11/2004	Tyson R. McGuffin	200208613-1	4956

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EXAMINER

WHITMORE, STACY

ART UNIT	PAPER NUMBER
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2825

DATE MAILED: 02/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/798,038

**Applicant(s)**

MCGUFFIN ET AL.

**Examiner**

Stacy A. Whitmore

**Art Unit**

2825

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on response to restriction requirement date.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 1-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 26-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3/11/2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

#### DETAILED ACTION

1. Applicant's election with traverse of claims 26-30 in the reply filed on 11/28/2005 is acknowledged. The traversal is on the ground(s) that there are not different species claimed, and that all claims read on the particular method of claim 26 in that all species comprise elements of generating first and second parameters associated with non-selected objective and a selected objective and generating cost ranges as claimed in group V, claims 26-30. This is not found persuasive because The claims are directed towards various different methods of evaluating objectives as disclosed by the different embodiments in paragraphs 0003-0007 of applicants specification.

The requirement is still deemed proper and is therefore made FINAL.

#### Claim Rejections - 35 USC § 112

2. Claims 26-30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 26 has been amended to exclude the limitation "not" in line 9 of the claim. The amendment is an exact opposite limitation of that previously described in the specification for the claim set in the specification at paragraph 0007.

#### Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section

351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claim 26 is rejected under 35 U.S.C. 102(e) as being anticipated by McConaghy (US Patent 6,910,192).

4. As for claim 26, McConaghy discloses the invention as claimed, including a computer readable medium having computer executable instructions for performing a method comprising:  
generating a first set of parameters associated with a non-selected objective and a second set of parameters associated with a selected objective, the first and second set of parameters being based on a value set [col. 3 – determining at least one function value for each objective function];  
generating costs at a first cost range based on the first set of parameters if the first set of parameters do not meet constraints associated with the non-selected objective [col. 3; col. 5 – determining estimators of design quality in col. 3; ]; and  
generating costs at a second cost range based on the second set of parameters if the first set of parameters do not meet constraints associated with the non-selected objective, the first cost range being substantially higher than the second cost range [col. 3; col. 5, and col. 7, lines 30-67 – costs being the quality estimators or best fitness values which are used to determine the best candidates for the evolutionary algorithm].

#### Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made

to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 27-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over McConaghy (US Patent 6,910,192) in view of Wang (US Patent 6,578,176).

6. As for claim 27, McConaghy discloses the invention substantially as claimed, including . the computer readable medium having computer executable instructions for performing the method of claim 26 as cited above in the rejection of claim 26; and further discloses repeating generating costs, storing value sets and executing the genetic algorithm, until a desirable value set variation is determined to have an acceptable cost based on the selected objective [col. 3]; the value set and value set variations corresponding to different circuit design configurations [col. 1, and col. 3];

McConaghy does not specifically disclose storing value sets and associated costs as chromosomes in a chromosome pool; and executing a genetic algorithm on the stored value sets to generate value set variations based on chromosomes in the chromosome pool with lower costs or the constraints associated with the non-selected objective being timing constraints and the selected objective being power.

Wang discloses storing value sets and associated costs as chromosomes in a chromosome pool; and executing a genetic algorithm on the stored value sets to generate value set variations based on chromosomes in the chromosome pool with lower costs [col. 8; and col. 9, line 55 – col. 10], and the constraints associated with the non-selected objective being timing constraints and the selected objective being power [col. 8].

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of McConaghy and Wang because storing value sets and associated costs as chromosomes in a chromosome pool; and executing a genetic algorithm on the stored value sets to generate value set variations based on chromosomes in the chromosome pool with lower costs using Wang's chromosome and chromosome pool for the value sets would allow for the natural evolution of a value set within McConaghy's system which would then utilize a normal process when using genetic algorithms [see Wang especially col. 10, lines 20-50]. Further It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of McConaghy and Wang because having the constraints based on power and timing would have allowed for the optimization of McConaghy's system to map a design towards a feasible solution [see Wang – col. 8, lines 10-22].

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stacy A. Whitmore whose telephone number is (571) 272-1685. The examiner can normally be reached on Monday-Thursday, alternate Friday 6:30am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Chiang can be reached on (571) 272-7483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Stacy A Whitmore



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Primary Examiner  
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SAW  
February 6, 2006